

an auxiliary electrode provided on an outer periphery of said first electrode to excite plasma in a vicinity of the auxiliary electrode,

wherein electrons in the plasma drift from a front surface of said auxiliary electrode to a back surface thereof and from the back surface of said auxiliary electrode to the front surface thereof.

7. (Twice Amended) A plasma processing method performed in a plasma processing apparatus comprising a first electrode on which a substrate on which a substrate is positioned and an auxiliary electrode provided on an outer periphery of said first electrode, the method comprising:

subjecting the substrate to a plasma process containing a plasma;
applying a static magnetic field to a surface of the substrate to which the plasma process is applied;
exciting plasma on at least a back surface of the auxiliary electrode; and
causing electrons in the plasma to drift from a front surface of said auxiliary electrode to the back surface thereof and from the back surface of said auxiliary electrode to the front surface thereof.

Please enter the following new claim:

8. (New) A plasma processing apparatus comprising:
a first electrode;
a substrate configured to be subjected to a plasma, the substrate being positioned on the first electrode;

a magnetic field generator configured to apply a static magnetic field to a surface of the substrate to which the plasma process is applied; and

an auxiliary electrode provided on an outer periphery of said first electrode to excite plasma in a vicinity of the auxiliary electrode, the front surface of said auxiliary electrode being covered by an insulating material,

wherein electrons in the plasma drift from a front surface of said auxiliary electrode to a back surface thereof and from the back surface of said auxiliary electrode to the front surface thereof.